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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4798.11-2024

**Classification of environmental conditions - Classification of
groups of environmental parameters and their severities - Part
11: Drawing the distribution map of environmental severities**

环境条件分类 环境参数组分类及其严酷程度分级 第11部分：环境严酷度分布图
绘制

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document is Part 11 of GB/T 4798. GB/T 4798 has been published in the following parts.

--GB/T 4798.1-2019 Classification of environmental conditions Classification of environmental parameter groups and their severity classification Part

1. Storage; --GB/T 4798.2-2021 Classification of environmental conditions Classification of environmental parameter groups and their severity classification Part

2. Transport and loading and unloading; --GB/T 4798.3-2023 Classification of environmental conditions Classification of environmental parameter groups and their severity classification Part

3. Air Fixed use in protective places; --GB/T 4798.4-2023 Classification of environmental conditions Classification of environmental parameter groups and their severity classification Part

4. Airless Fixed use in protective places; --GB/T 4798.5-2007 Environmental conditions for application of electrical and electronic products Part

5. Use in ground vehicles; --GB/T 4798.6-2012 Classification of environmental conditions Classification of environmental parameter groups and their severity levels for marine use; --GB/T 4798.7-2007 Environmental conditions for application of electrical and electronic products Part

7. Portable and non-stationary use; --GB/T 4798.9-2012 Classification of environmental conditions Classification of environmental parameter groups and their severity classification Microclimate inside the product. --GB/T 4798.10-2006 Introduction to environmental conditions for application of electrical and electronic products; Draw a distribution map of environmental severity. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for

identifying patents. This document is proposed and coordinated by the National Technical Committee for Standardization of Environmental Conditions and Environmental Testing for Electrical and Electronic Products (SAC/TC 8). This document was drafted by: China Electric Power Research Institute Co., Ltd., Guangdong Power Grid Co., Ltd. Electric Power Research Institute, Guangdong Yudean Technology Testing and Inspection Technology Co., Ltd., State Grid Jiangxi Electric Power Co., Ltd. Electric Power Research Institute, Xiamen Shuai Ke Sanitary Ware Appliance Co., Ltd. Co., Ltd., Shenzhen Power Supply Bureau Co., Ltd., Guangdong Power Grid Co., Ltd. Guangzhou Power Supply Bureau, Shanghai Quality Supervision and Inspection Technology Research Institute, Siemens Power Automation Co., Ltd., State Grid Sichuan Electric Power Company Electric Power Research Institute, Shenyang Avionics Testing Technology Co., Ltd., Goldwind Technology Co., Ltd., Shenzhen Polytechnic, China Southern Power Grid Co., Ltd. Ultra-high Voltage Transmission Company Power Research Institute, Guangzhou Sibosu Electronic Technology Co., Ltd., Hainan Power Grid Co., Ltd. Electric Power Research Institute, Guangdong South China Home Appliance Research Institute, China Electric Power Science and Technology RESEARCH INSTITUTE LIMITED. The main drafters of this document are. Qin Hanjun, Chen Chuan, Lv Wangyan, Li Xin, Yan Nianping, Liu Xin, Hou Quanduo, Lv Qishen, Xiong Jun, Wang Tingting, Fu Junhua, Zhu Chen, Xia Yalong, Kong Xiangyu, Zhang Jingyi, Liang Yongchun, Chen Tian, Zhang Congguang, Wei Xiaoxing, Zhang Kemin, Pang Songling, Lai Jing, Deng Yu, Li Guangmao.

GB/T 4798 "Classification of Environmental Conditions, Classification of Environmental Parameter Groups and Classification of Severity" covers the following aspects. and the environmental conditions that may be encountered during use. These classifications also take into account the degree of restrictions on the use of the product, from Strict restrictions (such as in a temperature-controlled room) to unrestricted conditions. GB/T 4798 is intended to consist of 10 parts. --Part

- 1.Storage. The purpose is to provide a classification of environmental parameters and their severity during storage of the product. --Part
- 2.Transportation and handling. The purpose is to provide the environmental parameters and their severity that the product is subjected to during transportation and handling. Coolness rating. --Part
- 3.Fixed use in weather-protected locations. The purpose is to provide the product's ability to withstand fixed use in weather-protected locations. Environmental parameter groups and their severity classification. --Part
- 4.Stationary use in places without weather protection. The purpose is to give the product's ability to withstand stationary use in places without weather protection. Environmental parameter groups and their severity classification. -- Part
- 5.Use in ground vehicles. The purpose is to provide environmental parameters to which

products installed in vehicles but not constituting the vehicle are subjected Groups and their severity ratings. -- Part

1 Scope

GB/T 4798.11-2024 is Part 11 of the Chinese series on the classification of environmental conditions, and covers the drawing of environmental severity distribution maps. The earlier parts classify environments into severity grades; this part turns those grades into geography, so that a designer can see which severity class applies where a product will be used rather than reasoning from a table of climatic parameters. China spans the range from Hainan's humid heat to the Tibetan plateau to the cold of Heilongjiang, which makes the maps unusually consequential for specifying equipment. The standard sets the basic information required, the types and classification of the maps, the drawing of an environmental severity distribution map and the process of producing one, with a normative annex giving the grid data correction method. It took effect on 23 August 2024.

This document provides the basic environmental data and environmental severity level required for drawing the distribution map of environmental severity of electrical and electronic products. Methods for drawing classification and distribution maps. This document is applicable to the drawing of environmental parameter distribution diagrams and environmental response characteristic distribution diagrams of electrical and electronic products. Environmental parameters include temperature, phase Environmental response characteristics include corrosion, wind speed, condensation, solar radiation, salt spray concentration, hydrogen sulfide concentration, ground lightning density, ice thickness, etc. Aging, corrosion, etc. This document is applicable to electrical and electronic products used in places without climate protection and places with climate protection, such as new energy power generation equipment, Power grid equipment, energy storage equipment, communication equipment and rail transit equipment, etc.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 22021 Basic Technical Regulations for National Geodetic Survey

GB/T 50001 Unified standard for building architectural drawings

GB/T 50105 Building structure drawing standard

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 electronic map Electronic geographic basic data that serves as the basis for the Geographic Information System (GIS).

Note. Electronic maps include basic geographic information such as provincial boundaries, county (city) boundaries, contour lines, water systems, waterways, expressways, national highways, provincial highways, and railways. [Source: DL/T 2237-2021, 3.9]

3.2 distribution map of environmental severities Based on the monitoring data of environmental parameters, after data analysis and processing, the electronic map is drawn according to certain severity level principles. Building structure drawings or equipment structure drawings.

Note. The environmental severity distribution diagram is used to characterize the distribution of environmental severity.

3.3 Environmental response characteristics The response characteristics of the product to the environmental parameters of the service environment.